U.S. DEPARTMENT OF ENERGY

SAVANNAH RIVER OPERATIONS OFFICE
AIKEN, SC 29802

NEWS MEDIA CONTACT:
Jim Giusti, DOE, (803) 952-7697
james-r.giusti@srs.gov

Paivi Nettamo, SRNS, (803) 952-6938
paivi.nettamo@srs.gov

FOR IMMEDIATE RELEASE
Wednesday, October 7, 2009

SRS Technology a Success – Five Billion Times

Aiken, SC (Oct. 7) – After nearly a quarter century, over five billion gallons of groundwater – enough to fill 7,575 Olympic sized swimming pools – has been successfully extracted and remediated from Savannah River Site's (SRS) A and M Areas utilizing the M-1 Air Stripper, an environmental remediation technology which is still going strong.

Historically, these areas contained facilities that manufactured reactor fuel and target assemblies, and also provided support, administrative and laboratory services to SRS.

During manufacturing activities, which took place from the 1950s to the 1980s, a variety of industrial solvents were used to clean and degrease the various equipment and fuel components. These solvents were then discharged to the environment within the A and M Areas, a common practice during the time.

Following the installation of monitoring wells in 1985, it was discovered that the solvents had contaminated the groundwater. The primary contaminants detected were the solvents trichloroethylene (TCE) and tetrachloroethylene (PCE). These compounds are common in industrial sites across the country as well as dry cleaning establishments. Solvents were used in this area to remove grease and oils from metal components.
TCE and PCE are Dense Non Aqueous Phase Liquids (DNAPLs), which means that they are heavier than water, an attribute which allows them to seep through the vadose zone and taint the underlying groundwater. The vadose zone is a porous area between the surface and the groundwater. The pores may be filled with water or air, acting as a natural filtration system.

The air stripper, one of two in the area, operates by pumping air and water into its chamber in opposing directions. As the air reaches the contaminants, the TCE and PCE are transformed into a vapor and discharged from the air stripper stack. Air releases are

regulated and monitored in accordance with state and federal requirements. The groundwater is then released back to a site stream, free of solvent contamination.

The M-1 Air Stripper was the first full scale remediation system deployed to remediate groundwater impacted by solvents. "The M-1 has proven to be a workhorse system for us. It is extremely reliable and requires minimal effort to operate and maintain," said Jim Kupar, technical lead for this system.

Now, thanks to the American Reinvestment and Recovery Act (ARRA), SRS has been able to fully fund remedial projects like the M1 Airstripper thus accelerating the cleanup and closure of numerous waste sites throughout the complex. Approximately $750,000 of Recovery Act funding will be spent on this effort during the 30 month project at SRS.

For the 24 years that the air stripper has been in operation, over 430 thousand pounds of solvents have been removed from the groundwater. While the Site continues to evaluate and deploy aggressive technologies for volatile organic compounds elsewhere, the consistent efficiency of the M-1 Airstripper has proven to be a beneficial technology to Site personnel.

For additional information on the Department of Energy's Office of Environmental Management and the Savannah River Site, can be found at http://www.em.doe.gov or http://www.srs.gov. For more information about the SRS Recovery Act Project, please visit www.srs.gov/recovery.

-DOE-

SR-2009-26